IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicant:

Udayakumar et al.

Filed:

Herewith

For:

LOW SILICON-HYDROGEN SIN LAYER TO INHIBIT HYDROGEN RELATED DEGRADATION IN SEMICONDUCTOR DEVICES HAVING FERROELECTRIC

COMPONENTS

INFORMATION DISCLOSURE STATEMENT

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-1449. A copy of each listed document is enclosed except for: (a) pending applications or (b) those previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. 120:

Serial No.: _	 	
Filing Date:		

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

- 2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):
 - (a) ___ Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
 - (b) ___ Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".
 - 3. Pursuant to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):
 - (a) X Within 3 months of the filing date or date of entry into the National Stage.
 - (b) ____ Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 20-0668 for consideration of this Statement.
 - (c) ____ Before the mailing date of a first Office Action on the merits after a first or second submission under 37 C.F.R. 1.129(a).

(d)	After the period set forth in 37 action or a notice of allowance	7 C.F.R. 1.97(b) but before the mailing date of either a final e.
(1) _	The required certification is	given below, <u>or</u>
(2)	Enclosed is a check covering this Statement, or	ng the fee set forth in 37 C.F.R. 1.17(p) for consideration of
(3) _	Charge the fee set forth in 3	37 C.F.R. 1.17(p) to Deposit Account No. 20-0668
(e)		a final action or a notice of allowance, but before payment of is made for consideration of this Statement and the required '.
(1) _	Enclosed is a check coverir	ng the fee set forth in 37 C.F.R. 1.17(i)(1), or
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(a)	was cited in a communication	ies that each item of information contained in this Statement on from a foreign patent office in a counterpart foreign onths prior to the filing of this Statement.
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Deposit Accou	unt No. 20-0668. I	Respectfully Submitted,
		ESCHWEILER & ASSOCIATES, LLC
		Thomas G. Eschweiler Registration No. 36,981
National City E 629 Euclid Ave Cleveland, Oh	enue, Suite 1210	
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I hereby certify tha	at this paper, and the documents refer	red to as attached or enclosed, are being deposited with the United States
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with the below indicated mailing label number, addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: August 7, 2003

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STATEMENT BY APPLICANT

(use as many sheets as necessary)

First Named Inventor

Group Art Unit

Examiner Name

Attorney Docket No.

U.S. PATENT DOCUMENTS								
	L	U.S. Patent D	ocument	Name of Patentee or	Date of Pub. of			
Exam. Initials*	Cite No.1	Number	Kind Code ² (if known)	Applicant of Cited Doc.	Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
	AA	6,576,482	B1	Aggarwal et al.	06/10/2003	Entire Document		
	AB							
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	FOREIGN PATENT DOCUMENTS							
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		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Exam. Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	"The Hydrogen Content of Plasma-Deposited silicon Nitride", W. A. LANFORD and M. J. RAND, American Institute of Physics, J. Appl. Phys. 49(4), April, 1978, Pgs. 2473-2477.	
	СВ	"Free Energy Model for the Analysis of Bonding in a-Si _x N _y H _z Alloys", Z. YIN and W. SMITH, J. Vac. Sci. Technol. A, Volume 9, No. 3, MayJune, 1991, pg. 972.	
	СС	"Comparison Between HCP CVD and PECVD Silicon Nitride for Advanced Interconnect Applications", J. YOTA, M. JANANI, L.E. CAMILLETTI, A. KAR-ROY, Q.Z. LIU, C. NGUYEN, M.D. WOO J. HANDER, and P. VAN CLEEMPUT, IEEE, 2000, pgs, 76-78.	
	CD	"Hydrogen Role on the Properties of Amorphous Silicon Nitride", F. DE BRITO MOTS, J.F. JUSTO and A. FAZZIO, Journal of Applied Physics, Volume 86, Number 4, August 15, 1999, pgs. 1843-1847.	
	CE		
	CF		
	СН		

Examiner	Date	
Signature	Considered	

US and Foreign Patent Documents: ¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Other Prior Art/Non-Patent Literature Documents: ¹Unique citation designation number. ²Applicant is to place a check mark here if English Translation is attached.

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.